

Does Greenery Make the City More Liveable by Lowering Our Stress Levels And Improving Our Mental As Well As Physical Health?



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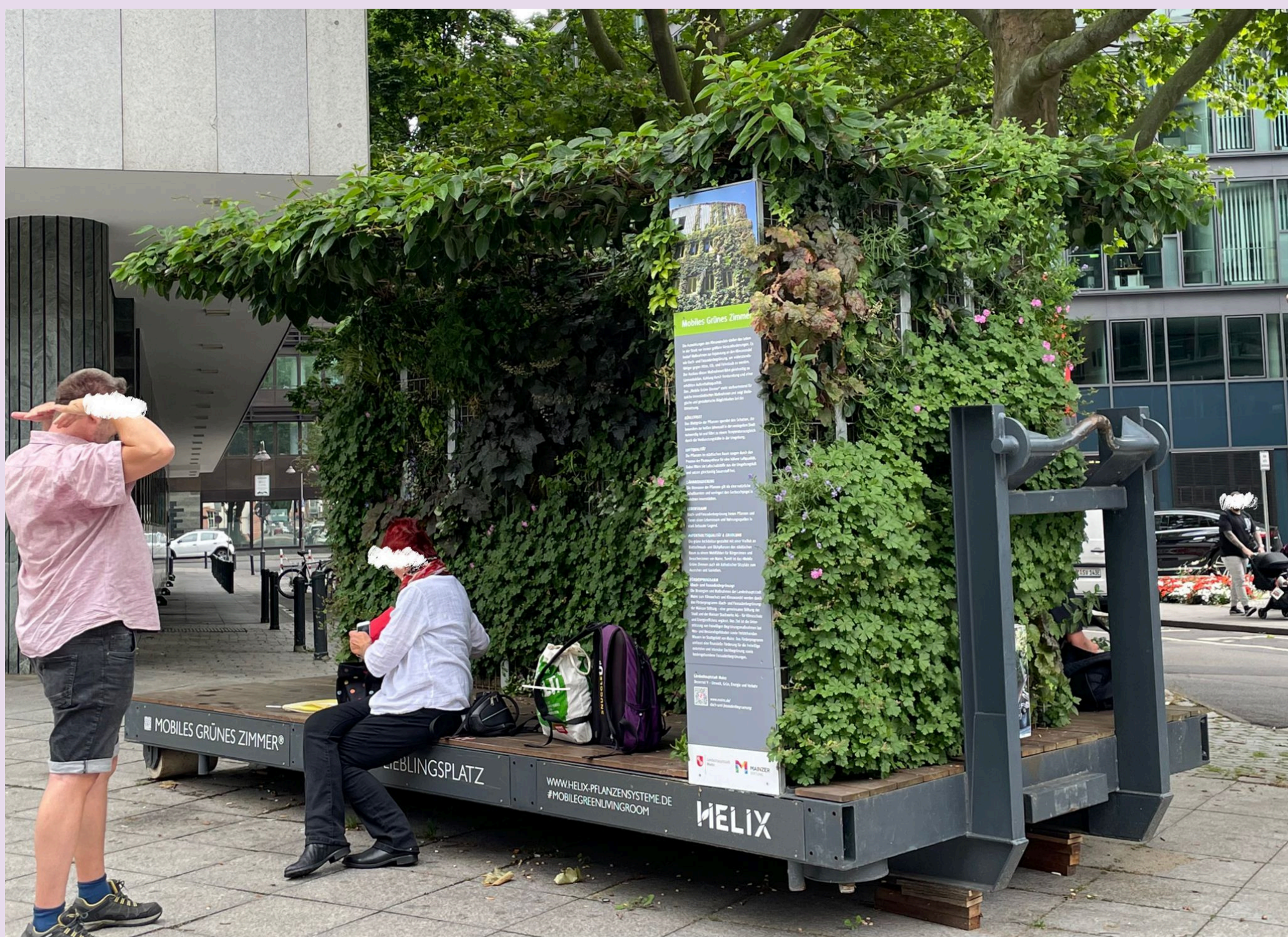


Katholische Klinikum Koblenz, *Katholische Klinikum Koblenz*

Do Urban Forests And Parks Make the City More Liveable by **Making Us Feel More Positive?**



Die “Elsa”, *ELCO*



Mobile Grüne Zimmer, *Romy Weidner*

Do Tree-Lined Roads Make the City More Liveable by **Making Roads Safer?**



Rheinallee, *Sensor*



**Kaiserstrasse,
*Markus Schug***

Does Greenery Make the City More Liveable by **Regulating Temperature And Lowering Impacts of Droughts And Heavy Rain?**



Grüne Brücke, *Lokale Agenda Klein-Winternheim*



Entsiegelung Mainz, *Ralf Keinath*

“Making cities liveable for all remains one of the greatest challenges of the 21st century.”

Ingolf Dietrich, Commissioner for the 2030 Agenda for Sustainable Development at the Federal Ministry for Economic Cooperation and Development, Germany



But what makes a city liveable? Could it be nature? Based on existing literature, we formed the following hypothesis:

Integrating nature into urban planning makes Mainz more liveable.

Based on the 2023 ‘Nature-Based Infrastructure’ UNEP report, we made several claims and then tried to find support for them in Mainz.

Urban forests:

Wolf (2005) reported that trees [around retail centers] help to form more positive consumer experiences in central business districts

→ **Urban forests make us feel more positive and therefore make the space more liveable.**



What is nature-based infrastructure?

Areas or systems that harness nature to provide infrastructure services for people, the economy, and the environment

e.g., natural ecosystems, such as forests, mangroves, wetlands, and grasslands; engineered or “grey” structures that incorporate nature-based solutions, like rain gardens and green roofs

Tree-lined roads: Tree lined roads make it feel like the road is narrower and encourage slower driving, can increase driver attention span, and can also act as a buffer between pedestrians and road vehicles (UNEP, 2023).

→ **Trees around rounds make roads safer, and therefore make the space more liveable.**

Greenery and Health: For example, therapeutic gardens can speed up recovery time and reduce the length of stays in hospital (Viray 2018; Newman 2018; Raanaas et al. 2011; Ulrich et al. 1984), lead to reduced stress in hospital waiting rooms (Beukeboom et al. 2012) and provide restorative qualities in hospital break areas (Nejati et al. 2016).

Nature therapy (gardening, walking groups, nature appreciation, and conservation) is considered to provide preventative medical benefits, via physiological relaxation and stress recovery, and potential solutions for elderly patients undergoing rehabilitation and those who experience high mental stress and physical pain (Jo et al. 2019).

For children, greener environments are linked to better physical and mental health, attentiveness and learning ability, and a reduction in stress. (UNEP, 2023).

→ **Greenery lowers our stress levels and improves our mental health, and therefore makes the city more liveable.**

The benefits of nature for preventing physical health issues are also evidenced, including for heart rates and blood pressure, stress levels, obesity, type 2 diabetes, post-operative recovery, birth weight, cardiovascular disease, and improved immune responses (World Bank 2021).

→ **Greenery improves our physical health, and therefore makes the city more liveable.**

Weather mitigation: Creation of gardens, green walls and roofs provide thermal regulation and reduce the need for heating and cooling. Greenery also helps mitigate the impacts of draughts and heavy rains by retaining water.

→ **Greenery regulates temperatures of streets and lowers impacts of droughts and heavy rains, and therefore makes the city more liveable.**

So, what do you think? Does nature make Mainz more liveable?



Take a look at the images of
some places in Mainz and
ask yourself whether you
like them better with or
without nature.



Sources

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